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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,172	02/27/2004	Shin-ichi Uehara	Q80096	4907
23373 7590 01/17/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER FINEMAN, LEE A	
			ART UNIT	PAPER NUMBER
			2872	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/787,172

Applicant(s)

UEHARA ET AL.

Examiner

Lee Fineman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 15 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 15 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 13 November 2006 has been entered in which Claim 1 has been amended and claim 6-14 and 17-43 have been cancelled. Claims 1-5, 15 and 16 are pending.

Claim Objections

2. Claims 2-5, 15 and 16 are objected to because of the following informalities: The limitation "said fixing unit" in each of these claims lacks antecedent basis. For the purposes of examination, it will be taken to be a fixing layer as newly amended in the independent claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 1, 3 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Eichenlaub, US 5,500,765 (henceforth Eichenlaub '765).

Regarding claim 1, Eichenlaub '765 discloses in fig. 5 an image display device, (100) comprising: a display panel (112) which has a plurality of pixel sections (122) each of which includes at least a pixel displaying an image for the first viewpoint and a pixel displaying an image for the second viewpoint, said pixel sections being provided periodically in one direction (see column 4, line 59-column 5, line 7); an optical unit (118) which refracts the light emitted from said pixels and emits the light in directions different from each other (column 6, lines 46-53), and a fixing layer (hinge, not shown in fig. 5, see fig. 1, the hinge is considered a layer in so far as it is on top of (i.e., layered on) at least part of the display area) which is provided on at least a part of an area enclosing an image display area of said display panel, said fixing layer fixing said optical unit to said display panel (column 6, lines 56-58), wherein a gap (at least the area between the tops of lenticular lenses 126 (see fig. 5A) and the flat display panel section (140, see fig. 5) is formed between said display panel (112) and said optical unit (118) in the image display area (fig. 5).

Regarding claim 3 and 15, Eichenlaub '765 further discloses wherein said optical unit is a lenticular lens (118) having a plurality of semicylindrical lenses (fig. 5A), longitudinal direction of which is perpendicular to said one direction (fig. 5), and said fixing layer (hinge, not shown in fig. 5, see fig. 1) is provided along the side extending in a direction orthogonal to the longitudinal direction of said semicylindrical lens in said optical unit.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eichenlaub '765.

Eichenlaub '765 discloses the claimed invention except for the rearrangement of said fixing layer to be provided along the side extending in the longitudinal direction of said semicylindrical lens in said optical unit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the fixing layer to be provided along the side extending in the longitudinal direction of said semicylindrical lens in said optical unit, since it has been held that a mere rearrangement of an element without modification of the operation of the device involves only routine skill in the art. One would have been motivated to rearrange the fixing layer to be provided along the side extending in the longitudinal direction of said semicylindrical lens in said optical unit for the purpose of preventing accidental/unwanted closures of the lens sheet due to gravity. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

7. Claims 4-5 and 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eichenlaub '765 in view of Eichenlaub, US 5,410,345 (henceforth Eichenlaub '345).

Regarding claim 5 and 16, Eichenlaub '765 further discloses wherein the optical unit is a fly-eye lens having a plurality of convex lenses (column 6, lines 48-49) but is silent to the lens

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pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other. Eichenlaub '345 teaches in fig. 13 that fly-eye lenses (178) with the lens pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other are a well known lens array in the stereoscopic art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a fly-eye lens with the lens pitch in said one direction and the lens pitch in a direction perpendicular to said one direction are equal to each other as taught by Eichenlaub '345 in the system of Eichenlaub '765 as they are commonly available and easy to obtain type of lens array. Therefore, said fixing layer (hinge, not shown in fig. 5, see fig. 1) is provided along the side orthogonal to the short side of said optical unit.

Regarding claim 4, Eichenlaub '765 in view of Eichenlaub '345 as set forth above discloses the claimed invention except for the rearrangement of said fixing layer to be provided along a short side of said optical unit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the fixing layer to be provided along a short side of said optical unit, since it has been held that a mere rearrangement of an element without modification of the operation of the device involves only routine skill in the art. One would have been motivated to rearrange the fixing layer to be provided along a short side of said optical unit for the purpose of preventing accidental/unwanted closures of the lens sheet due to gravity. *In re Japikse*, 181 F.2d 1019, 86 USPQ 70 (CCPA 1950).

Response to Arguments

8. Applicant's arguments filed 13 November 2006 have been fully considered but they are not persuasive.

The applicant again argues that Eichenlaub '765 combines two images into a 3D image projected into a region of space in front of the display and therefore does not refract the light and emit the light in directions different from each other as claimed. The examiner respectfully disagrees. As is well known in the art and stated in the background of Eichenlaub (see column 1, lines 24-32 and column 6, lines 51-53) to achieve the autostereoscopic three-dimensional image with lenticular lenses, **two different images** (right and left) are sent to the different viewer eye zones. Therefore it is the examiner's position that the optical unit of Eichenlaub does refract the light and emit the light in directions different from each other and meets the claimed language. The examiner asked the applicant to explain how the images of Eichenlaub are perceived as three-dimensional by the viewer as argued without having different left and right image.

Applicant further argues that Eichenlaub '765 does not include a fixing layer fixing said optical unit to said display panel and a gap formed between said display panel and said optical unit in the image display area. The examiner respectfully disagrees. As detailed in the rejection above Eichenlaub '765 discloses a fixing layer (hinge, not shown in fig. 5, see fig. 1, the hinge is considered a layer in so far as it is on top of (i.e., layered on) at least part of the display area) which is provided on at least a part of an area enclosing an image display area of said display panel, said fixing layer fixing said optical unit to said display panel (column 6, lines 56-58), wherein a gap (at least the area between the tops of lenticular lenses 126 (see fig. 5A) and the flat

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display panel section (140, see fig. 5) is formed between said display panel (112) and said optical unit (118) in the image display area (fig. 5).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



LAF

22 December 2006



MARK A. ROBINSON
PRIMARY EXAMINER